

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A semiconductor device comprising:

~~stacked semiconductor elements each having at least one thin film transistor;~~

a first semiconductor element including at least one thin film transistor;

a second semiconductor element including at least one thin film transistor;

a resin film formed between the stacked semiconductor elements the first semiconductor element and the second semiconductor element;

a light emitting element electrically connected to one of the stacked semiconductor elements, the first semiconductor element; and

a light receiving element electrically connected to another one of the stacked semiconductor elements the second semiconductor element,

wherein the first semiconductor element and the second semiconductor element are stacked,

wherein a signal is transmitted and received between the stacked semiconductor elements the first semiconductor element and the second semiconductor element by using the light emitting element and the light receiving element,

wherein the light emitting element comprises a first electrode, a second electrode, and an electro-luminescent layer formed between the first electrode and the second electrode, and

wherein the first electrode, the electro-luminescent layer, and the second electrode are overlapped each other.

2. (Currently Amended) A semiconductor device comprising:

~~stacked semiconductor elements each having at least one thin film transistor;~~

a first semiconductor element including at least one thin film transistor;

a second semiconductor element including at least one thin film transistor;

a resin film formed between the stacked semiconductor elements the first semiconductor element and the second semiconductor element;

a metal oxide partially formed between the stacked semiconductor elements the first semiconductor element and the second semiconductor element; and

a light emitting element electrically connected to one of the stacked semiconductor elements, the first semiconductor element; and

a light receiving element electrically connected to another one of the stacked semiconductor elements the second semiconductor element,

wherein the first semiconductor element and the second semiconductor element are stacked,

wherein a signal is transmitted and received between the stacked semiconductor elements the first semiconductor element and the second semiconductor element by using the light emitting element and the light receiving element,

wherein the light emitting element comprises a first electrode, a second electrode, and an electro-luminescent layer formed between the first electrode and the second electrode, and

wherein the first electrode, the electro-luminescent layer, and the second electrode are overlapped each other.

3. (Currently Amended) A semiconductor device comprising:

~~stacked semiconductor elements each having at least one thin film transistor;~~

a first semiconductor element including at least one thin film transistor;

a second semiconductor element including at least one thin film transistor;

a resin film formed between the stacked semiconductor elements the first semiconductor element and the second semiconductor element;

a light emitting element electrically connected to ~~one of the stacked semiconductor elements~~ the first semiconductor element; and

a light receiving element electrically connected to ~~another one of the stacked semiconductor elements~~ the second semiconductor element,

wherein the first semiconductor element and the second semiconductor element are stacked,

wherein a first electric signal is converted to an optical signal in the light emitting element,

wherein the optical signal is converted to a second electric signal in the light receiving element,

wherein the light emitting element comprises a first electrode, a second electrode, and an electro-luminescent layer formed between the first electrode and the second electrode, and

wherein the first electrode, the electro-luminescent layer, and the second electrode are overlapped each other.

4. (Currently Amended) A semiconductor device comprising:

~~stacked semiconductor elements each having at least one thin film transistor;~~

a first semiconductor element including at least one thin film transistor;

a second semiconductor element including at least one thin film transistor;

a resin film formed between ~~the stacked semiconductor elements~~ the first semiconductor element and the second semiconductor element;

a metal oxide partially formed between ~~the stacked semiconductor elements~~ the first semiconductor element and the second semiconductor element;

a light emitting element electrically connected to ~~one of the stacked semiconductor elements~~ the first semiconductor element; and

wherein the first semiconductor element and the second semiconductor element are stacked,

wherein a first electric signal is converted to an optical signal in the light emitting element,

wherein the optical signal is converted to a second electric signal in the light receiving element,

wherein the light emitting element comprises a first electrode, a second electrode, and an electro-luminescent layer formed between the first electrode and the second electrode, and

wherein the first electrode, the electro-luminescent layer, and the second electrode are overlapped each other.

5. (Currently Amended) A semiconductor device comprising:

~~semiconductor elements each having~~ a first semiconductor element and a second semiconductor element each including at least one thin film transistor stacked by transferring a semiconductor element formed over a different substrate;

a resin film formed between ~~the stacked semiconductor elements~~ the first semiconductor element and the second semiconductor element;

a light emitting element electrically connected to ~~one of the stacked semiconductor elements~~ the first semiconductor element; and

a light receiving element electrically connected to ~~another one of the stacked semiconductor elements~~ the second semiconductor element,

wherein a first electric signal is converted to an optical signal in the light emitting element,

wherein the optical signal is converted to a second electric signal in the light receiving element,

wherein the light emitting element comprises a first electrode, a second electrode, and an electro-luminescent layer formed between the first electrode and the second electrode, and

wherein the first electrode, the electro-luminescent layer, and the second electrode are overlapped each other.

6. (Currently Amended) A semiconductor device comprising:

~~semiconductor elements each having~~ a first semiconductor element and a second semiconductor element each including at least one thin film transistor stacked by transferring a semiconductor element formed over a different substrate;

a resin film formed between ~~the stacked semiconductor elements~~ the first semiconductor element and the second semiconductor element;

a metal oxide partially formed between ~~the stacked semiconductor elements~~ the first semiconductor element and the second semiconductor element;

a light emitting element electrically connected to ~~one of the stacked semiconductor elements~~ the first semiconductor element; and

a light receiving element electrically connected to ~~another one of the stacked semiconductor elements~~ the second semiconductor element,

wherein a first electric signal is converted to an optical signal in the light emitting element,

wherein the optical signal is converted to a second electric signal in the light receiving element,

wherein the light emitting element comprises a first electrode, a second electrode, and an electro-luminescent layer formed between the first electrode and the second electrode, and

wherein the first electrode, the electro-luminescent layer, and the second electrode are overlapped each other.

7. (Currently Amended) A semiconductor device formed by detaching ~~a plurality of semiconductor elements each~~ a first semiconductor element formed over ~~a plurality of substrates~~ a first substrate and a second semiconductor element formed over a

second substrate and by stacking ~~the detached plurality of semiconductor elements~~ the first semiconductor element and the second semiconductor element over an element substrate, comprising:

a resin film formed between ~~the plurality of stacked semiconductor elements~~ the first semiconductor element and the second semiconductor element;

a light emitting element electrically connected to ~~one of the plurality of semiconductor elements~~ the first semiconductor element; and

a light receiving element electrically connected to ~~another one of the plurality of semiconductor elements~~ the second semiconductor element,

wherein a first electric signal is converted to an optical signal in the light emitting element,

wherein the optical signal is converted to a second electric signal in the light receiving element,

wherein each of ~~the semiconductor elements~~ the first semiconductor element and the second semiconductor element has at least one thin film transistor,

wherein the light emitting element comprises a first electrode, a second electrode, and an electro-luminescent layer formed between the first electrode and the second electrode, and

wherein the first electrode, the electro-luminescent layer, and the second electrode are overlapped each other.

8. (Currently Amended) A semiconductor device formed by detaching ~~a plurality of semiconductor elements~~ a first semiconductor element each formed over ~~a plurality of substrates~~ a first substrate and a second semiconductor element formed over a second substrate and by stacking ~~the detached plurality of semiconductor elements~~ the first semiconductor element and the second semiconductor element over an element substrate, comprising:

a resin film formed between ~~the plurality of stacked semiconductor elements~~ the first semiconductor element and the second semiconductor element;

a metal oxide partially formed between ~~the plurality of stacked semiconductor elements~~ the first semiconductor element and the second semiconductor element;

a light emitting element electrically connected to ~~one of the plurality of semiconductor elements~~ the first semiconductor element; and

a light receiving element electrically connected to ~~another one of the plurality of semiconductor elements~~ the second semiconductor element,

wherein a first electric signal is converted to an optical signal in the light emitting element,

wherein the optical signal is converted to a second electric signal in the light receiving element,

wherein each of ~~the semiconductor elements~~ the first semiconductor element and the second semiconductor element has at least one thin film transistor,

wherein the light emitting element comprises a first electrode, a second electrode, and an electro-luminescent layer formed between the first electrode and the second electrode, and

wherein the first electrode, the electro-luminescent layer, and the second electrode are overlapped each other.

9. (Currently Amended) A semiconductor device comprising:

~~a plurality of stacked thin film integrated circuits each having at least one thin film transistor attached to each other with a resin;~~

~~a light emitting element electrically connected to one of the stacked thin film integrated circuits; and~~

~~a light receiving element electrically connected to another one of the stacked thin film integrated circuits;~~

a first thin film integrated circuit including at least one thin film transistor and a light emitting element and an interface; and

a second thin film integrated circuit including at least one thin film transistor and a light receiving element, wherein the second thin film integrated circuit is attached to the first thin film integrated circuit with a resin;

wherein a first electric signal is converted to an optical signal in the light emitting element,

wherein the optical signal is converted to a second electric signal in the light receiving element,

wherein the light emitting element comprises a first electrode, a second electrode, and an electro-luminescent layer formed between the first electrode and the second electrode, and

wherein the first electrode, the electro-luminescent layer, and the second electrode are overlapped each other.

10. (Currently Amended) A semiconductor device comprising:

~~a plurality of stacked thin film integrated circuits each having at least one thin film transistor attached to each other with a resin;~~

a first thin film integrated circuit including at least one thin film transistor and a light emitting element and an interface;

a second thin film integrated circuit including at least one thin film transistor and a light receiving element, wherein the second thin film integrated circuit is attached to the first thin film integrated circuit with a resin; and

a metal oxide partially formed on either surface of each of the stacked thin film integrated circuits the first thin film integrated circuit and the second thin film integrated circuit;

~~a light emitting element electrically connected to one of the stacked thin film integrated circuits; and~~

~~a light receiving element electrically connected to another one of the stacked thin film integrated circuits,~~

wherein a first electric signal is converted to an optical signal in the light emitting element,

wherein the optical signal is converted to a second electric signal in the light receiving element,

wherein the light emitting element comprises a first electrode, a second electrode, and an electro-luminescent layer formed between the first electrode and the second electrode, and

wherein the first electrode, the electro-luminescent layer, and the second electrode are overlapped each other.

11. (Currently Amended) ~~A mobile phone having the semiconductor device according to any one of claims 1 to 10~~ An electronic equipment comprising the semiconductor device according to any one of claims 1 to 10, wherein the electronic equipment is selected from the group consisting of a mobile phone, an electronic book, a personal computer, an electronic card, and a watch.

12.-15. (Canceled)

16. (Previously Presented) A semiconductor device according to any one of claims 1 and 2, wherein the signal from the thin film transistor is inputted to the light emitting element.

17. (Previously Presented) A semiconductor device according to any one of claims 1 and 2, wherein the signal from the light receiving element is inputted to the thin film transistor.

18. (Previously Presented) A semiconductor device according to any one of claims 3 to 10, wherein the first electric signal from the thin film transistor is inputted to the light emitting element.

19. (Previously Presented) A semiconductor device according to any one of claims 3 to 10, wherein the second electric signal from the light receiving element is inputted to the thin film transistor.

20. (Previously Presented) A semiconductor device according to any one of claims 1 to 10, wherein the light emitting element is an organic light emitting device.

21. (Previously Presented) A semiconductor device according to any one of claims 1 to 10, wherein the electro-luminescent layer has a laminated structure.

22. (Currently Amended) A semiconductor device according to any one of claims ~~1 to 10~~ 1 to 8, wherein ~~the one of the stacked~~ the first semiconductor elements ~~elements~~ has a first crystallized semiconductor layer, and wherein ~~the another one of the stacked~~ the second semiconductor elements ~~elements~~ has a second crystallized semiconductor layer.

23. (New) A semiconductor device according to any one of claims 1 to 8, further comprising a third semiconductor element comprising at least one thin film transistor,
wherein the first semiconductor element, the second semiconductor element and the third semiconductor element are stacked.

24. (New) A semiconductor device according to any one of claims 1 to 8, wherein the first semiconductor element and the second semiconductor element is one

selected from the group consisting of a thin film transistor, a memory, a diode, an optoelectric converter, a resistor, a coil, a capacitor and an inductor.

25. (New) A semiconductor device according to any one of claims 1 to 8, wherein the first semiconductor element comprises a semiconductor layer.

26. (New) A semiconductor device according to any one of claims 1 to 8, wherein the first semiconductor element comprises a semiconductor layer, and wherein the electro-luminescent layer is physically separated from the first semiconductor layer.

27. (New) A semiconductor device according to claim 9 or 10, further comprising a third thin film integrated circuit,

wherein the first thin film integrated circuit, second thin film integrated circuit and the third thin film integrated circuit are stacked.